

VALUE DRIVEN APPROACH FOR SERVICES DESIGN

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ABSTRACT

A service is a time-perishable, intangible experience performed for a customer acting in the role of a co-producer. It involves application of specialized competences (knowledge and skills) through deeds, processes, and performances for the benefit of another entity or the entity itself in real world. In economics, service is an intangible and insubstantial commodity and the value of service is expected to be self-evident. We can see that as providers of services, there is difficulty in understanding value experienced by consumers and as consumers of services we need to bank on our experience; use trial and errors to find a high quality service provider. There is even lesser clarity on service delivery process that assures value and various aspects of service that creates value to users.

We propose a value driven approach for services design based on value creation system that exists amongst service providers and customers as a way to address this situation. We propose a theoretical framework based on value co-creation by cluster of stakeholders who are involved in the service delivery and consumption process as an approach to design services. We illustrate our approach and theoretical framework that we adopt in this paper

Keywords: Value driven approach, services design, value co-creation, theoretical framework

INTRODUCTION

The importance of service sectors has been steadily increasing in the modern economy. Services sector accounts for significant business revenue in terms of its contribution to GDP, number of job opportunities, growth in auxiliary industry, better remuneration, higher purchasing power, and better quality of life, etc; both in developed as well as developing nations [Wikipedia]. In this sector, people apply their specialized competencies (knowledge, skills and time) to produce services that improve productivity, performance, potential and sustainability through deeds, processes, and performances for the benefit of a customer in real world.

As per ISO 9004, service is a result [ISO]. This result is produced when people carry out activities that are oriented towards meeting customer needs. As per economics, service is an intangible and insubstantial commodity and the value of service is expected to be self-evident. This is because; services are consumed immediately and hence present a unique challenge in terms of delivering them with precision and desired quality. An interesting

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observation is that the desired services quality is hidden in the experience that the consumer has with the provider. Here the feedback is intangible and subjective making it difficult for potential consumers to understand what they will receive and what value it will hold for them.

For our discussion, we characterize consumers as the class of people who consume services and have different needs with varied importance that is catered by the service; consumers see value out of the consumed service and it dictates their choice of a provider. Providers are the class of people who provide services with required expertise and have varied skills that is used in delivering the service; they strive to excel in providing better services so that they can retain consumers and enhance their market share. We characterize value as worth of service to the consumer from consumer's point of view at the time of delivery [2] and service quality as a set of essential and distinguishing attributes that have a pragmatic interpretation of the service's inferiority or superiority.

Every consumer has a different notion of value that they wish to experience and look for a service that allows them in experiencing this value [Kai Glib]. Service providers strive continuously to improve their service levels in order to cope with this variability so as to increase/retain their market share. Often they make changes in people competencies, service components, service operation, service context, service delivery process, service quality, etc to improve their levels of service. These sporadic changes need to give meaningful benefits to consumers else it will degenerate the service and lead to diminishing returns in value.

INCOMPLETE VALUE CREATION SYSTEM IN SERVICES

Service sector needs ways and means for improving services as reputation for service industry for quality of services rendered is generally poor. There is enough evidence to indicate that almost all services are complex, incomplete, defective, and non-standardized and there exists tremendous difference of opinions as to the facts that result in this situation. We believe that to improve this situation, service providers should have a better handle on the value delivered by their services. In order to be able to offer and provide a service that is superior to competition, the service offering by itself needs to be articulated and described clearly in the first place.

Services are formless. They cannot be physically stored, seen or processed as their consumption is often simultaneous with their production and they do not require further processing. As a result of this formlessness, it becomes difficult for providers to describe their services and make the consumer see value in it before the service is rendered. Often, service descriptions border around service components, service quality and service contexts which are inadequate for the consumers to draw meaningful conclusions. Service providers accept this situation and try to live with it by ensuring that the service they provide functions seamlessly so that consumers can perceive it correctly. Now, if we try to figure out what aspect of a service adds value to consumers, how are they

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adding, how much is being added, what are all the value drivers and value vehicles, we find that we are not able to articulate the answers clearly.

Service is an intangible entity. It is because of this intangible nature that it is difficult to describe them; making them least understood. There is no transfer of possession or ownership when a service is rendered and consumed immediately. It is the experience of the consumer for a specific instance that makes the service valuable at the time of consumption. When the service is consumed repeatedly by a consumer then the consistency in experience makes the service valuable. So, we can see that services cannot be treated in the same way that we treat tangible entities. Services are complex; they involve multiple interactions among various entities involved in the production and delivery. They are interdisciplinary in nature with social, economic and emotional factors governing their existence. Failure to recognize this would lead to many good opportunities to be missed.

In order to improve a service, service providers identify all elements that appear unsatisfactory in the service and prescribe corrective measures to them without regard to how much harmful they would be for other elements that appear satisfactory. The reason for this lies in the fact that service providers generally lack established mechanisms and linkages for translation of conception to realization of a service and neither do they understand what it means to change a service. We believe that this situation arises because there is less clarity on extent of value experienced by consumers. There is even lesser clarity on the delivery process that assures value and various aspects of the service that creates value. This in essence is due to the fact that neither consumers nor providers are able to have clarity on the value creation system for services.

PROPOSED VALUE CREATION SYSTEM FOR SERVICES

A service can be looked as a number of events and actions that occur over a period of time. Service providers design the service in such a way that the actions, events and products are exposed to the consumer in a pre-defined sequence based on the needs of the consumer. These events and actions are implemented and orchestrated seamlessly so that consumers experience benefits. Such benefits can be tangible or intangible. Benefits that are tangible can be quantified and contribute directly to value perceived by consumers. Intangible benefits are subjective in nature, left to consumers' discretion and vary between consumers. One way to increase value to consumers is by reducing subjectivity in intangible benefits thereby making them tangible. To achieve this, a better idea of how services are realized and a much deeper understanding of people, human nature, psychology, philosophy and business are necessary so that value to all stakeholders can be identified, created, analyzed and improved.

Service providers offer services that cater to some chosen serviceable aspect of a consumers business. The first source of value is experienced when this service is consumed. When the service is consumed repeatedly then the consistency in experience is the next source of value. While, un-met and un-articulated needs pave way for new services and serve as source for future value, unused and evolving services pave way for

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more value to consumers. The excellence of services corresponds to quality characteristics of the service. We can see that this excellence stated as quality characteristics can serve as differentiator between various service providers providing similar offerings. We can see that such an excellence serves as an additional source of value. While it is difficult to articulate value of a service, it is relatively easier to state what its quality characteristics are. In any form of production, every process step leads to product quality which implies that quality can be controlled during production. Then, service delivery reduces to performing steps and taking decisions such that the service is accomplished, and involves adopting processes and structures to realize the service with desired quality characteristics and service design reduces to performing steps and taking design decisions about creating the specification of the service. Figure 1 illustrates the possible Value Creation System that exists between service consumers and service providers.

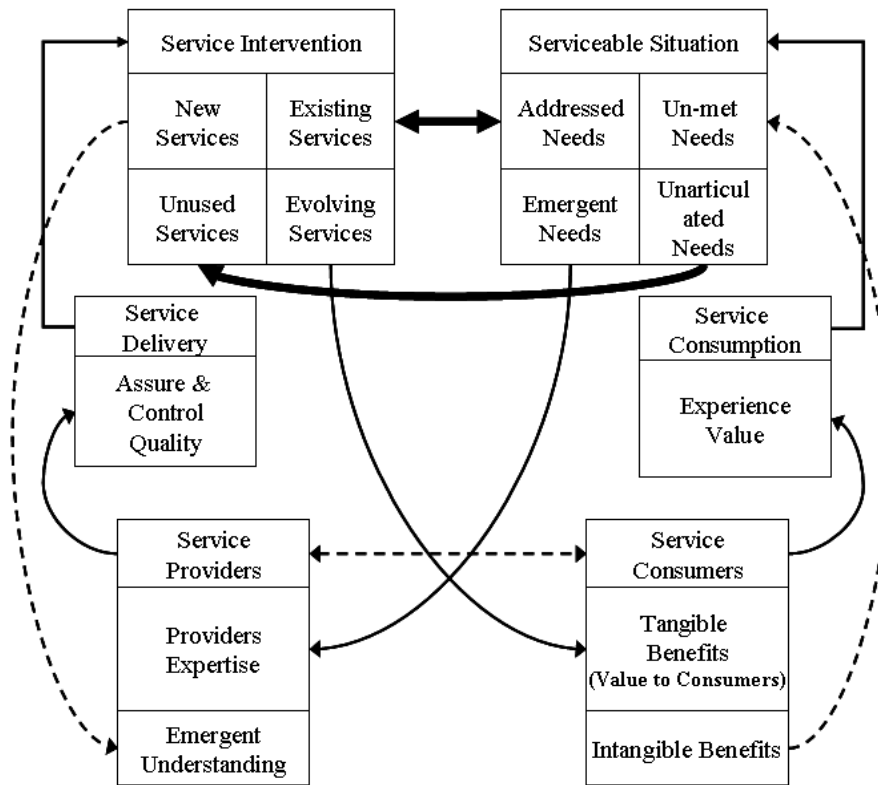


Figure 1. Value creation System for Services

UNDERLYING PRINCIPLES OF OUR VALUE BASED APPROACH FOR SERVICES DESIGN

Every service consumer has a different notion of value and this perception of value changes over time. Today whatever is perceived to be valuable for a consumer because of a service may not be valuable tomorrow due to changes that occur in consumers' environment. In such a scenario where change is a constant, service providers need a handle on how to offer services that copes with this changing perception of value. Often,

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consumers see more value in a service that is of higher quality. We can see that the distinguishing factor of a service is its quality. Service providers need to assure and control service quality in order to cope with consumers changing value perception. This is the first underlying principle in our value based approach.

A service provider can offer a service that has many qualities. However, not all of them might be valuable from consumers point of view, some of them might be trivial, some of them non-interesting and some of them delightful. This is the second underlying principle in our value based approach. This principle is based on Herzberg, Kano, Seraku, Takahashi and Tsuji (1984) [Kano] conclusion that consumers' satisfaction or dissatisfaction experience is not necessarily linear. Figure 2 illustrates their consumer satisfaction model. They qualified quality attributes into the following classes:

- a. Minimal qualities that are implicitly presumed to be present in a service. Consumers expect service providers to be knowledgeable about such qualities and expect them to implicitly build these qualities into the service.
- b. Qualities that could be the differentiators between service providers in the market – that is, all service providers build these qualities in their services, but some are better at it.
- c. Qualities that delight the consumer. These qualities are neither implicitly anticipated nor explicitly expected for the purposes of differentiation. They could be hallmarks of the service provider's intuitive understanding of needs that lead to customer delight.
- d. Qualities that have no impact on the consumers' satisfaction or dissatisfaction.
- e. Qualities that result in dissatisfaction even though it has been achieved to a high degree.

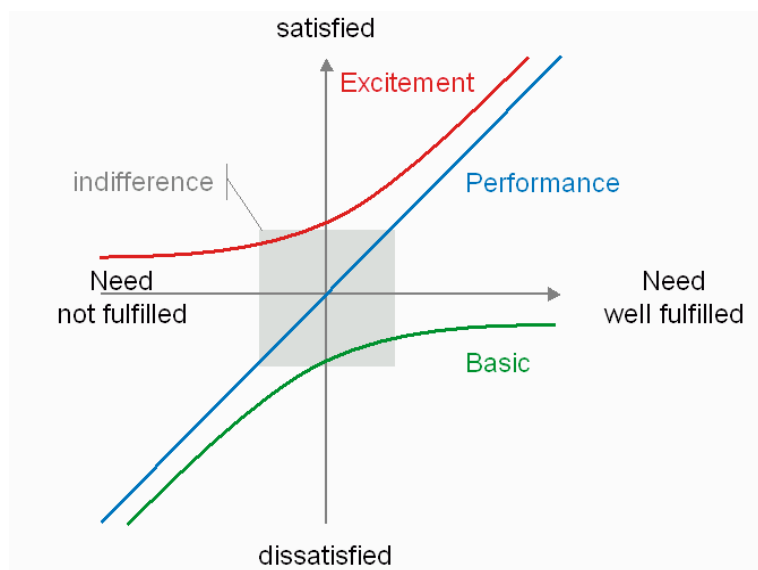


Figure 2. Kano model for distinguishing qualities

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Service design involves doing several things simultaneously, namely, describing the service, defining ways and means of assuring service qualities, organizing the service delivery process, organizing necessary resources, identifying what parts of the service is exposed to the consumer, creation of configurations of service components, and establishing interrelationships between the different configurations. While performing this act of design, there arise complex factors that govern a specific configuration. These factors arise as responses to consumer's needs and constraint the way interactions between configurations can be established. They are always competing/conflicting and it is the service designer's responsibility to establish dynamic equilibrium between various factors and create the configuration which exhibits the desired qualities after its embodiment. This is complex work and we believe that adopting the principle of separation of concerns is the way forward in this situation. As a result, every stakeholder in the design house would have exclusivity and singularity of purpose in the overall design which is achieved by establishing logical boundaries that delineates the service design responsibilities.

PROPOSED VALUE BASED APPROACH FOR SERVICES DESIGN

The objective of service design is to create a representation of an unknown service whose properties must be well enough understood in advance. The problem of service design involves specification of the proposed form and prediction of its properties before its embodiment. It involves understanding how the resources necessary for creating this form is organized formally, semantically and how it is represented and how these representations can be acted to produce effective transformations. It is a group activity involving classes of people like architects, engineers, producers, etc, working in unison. Typically, consumers request for benefits that correlate to service quality, architects realize functionalities for addressing service qualities; engineers realize functionalities for addressing architecture qualities; producers realize functionalities for addressing the engineering qualities and so on. In essence every producer-world stakeholder performs activities that contribute to value accumulated by consumers of the service.

Our approach to services design is based on a theoretical framework that separates levels of understanding of service qualities based on different knowledge domains involved and value accumulated at each of these levels. Ideally, at each level we address a subset of desired qualities to create a configuration of configuration items that host these qualities. As a result, we can assert that the non-overlapping qualities add up through the service delivery process. This has been achieved by segmenting the understanding of work to be done to deliver a service into different layers of discourse, each with its own local focus on quality. Here, if certain qualities having a bearing on value to consumers are difficult to handle/address then those qualities can be passed on and addressed at subsequent levels. As we move from one level to the next we have greater detail, which contributes to increase in granularity of structural understanding.

In order to exemplify value, we propose a top down approach, as shown in Table 1, where architecture establishes qualities in the configuration items that relate to serviceable situation and passes on qualities related to technologies and structures,

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engineering ensures that the technological qualities in the engineering configuration items are satisfied by relating them to knowledge domains, construction focuses on effective use of knowledge domains, and delivery establishes a match between the service and its operational environment.

SERVICE QUALITIES – ADOPTING THE SERVQUAL MODEL

So far, we have seen that service providers should provide services that are of interest to consumers and these services must have qualities that correlate to customers’ value and are infused into them by design. By controlling these qualities, service providers can ensure that the service is able to deliver desired value to its stakeholders.

Table 1. Value based approach for Services Design

Levels of Understanding	Specification of the Service	Quality Characteristics	Configuration Items	Value	
Serviceable Situation		Service Quality	Service Configuration	Overall value of the service to consumers	
Services Architecture		Architecture Qualities Addressed	Qualities passed on to Engineering Level	Architecture Level Configuration Items	+ value correlating to architecture qualities
Services Engineering		Engineering Qualities Addressed	Qualities passed on to Construction Level	Engineering Level Configuration Items	+ value correlating to engineering qualities
Services Construction		Construction Qualities Addressed	Qualities passed on to Delivery Level	Construction Level Configuration Items	+ value correlating to construction qualities
Services Delivery		Delivery Qualities Addressed	Qualities passed on to Environment Level	Delivery Level Configuration Items	+ value correlating to delivery qualities
Servicing Environment		Servicing Environment Qualities Addressed	Servicing Environment Configuration Items	+ value correlating to servicing environment qualities	

Now the question would be what would be the service qualities that need to exist in a service and how do we translate these qualities into multiple levels of understanding. To explain this, for our discussion purposes, we utilize the SERVQUAL [5] model as available in the services literature as the reference quality model. We instantiate this quality model at all levels of discourse and interpret it according to the concerns at the respective levels in order to have a consistent understanding of the service. Table 2 illustrates this interpretation.

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Table 2. SERVQUAL model and its interpretation at multiple levels of discourse

Levels of discourse	Tangibility	Reliability	Responsiveness	Assurance	Empathy
Situation	Correctness	Copes with change	Desired value for impended effort	Availability and knowledge ability	Increased agility to expand
Architecture	Provisions for unmet/ unarticulated needs	Certainty and Accountability of outcome	Reduces undesirable effects	Certainty of service	Coherence and Order
Engineering	Works in normal operational limits	Measure of consistency and repeatability	Measure of Speed and space	Feasible service parameters	Speed, control and response
Construction	Repeatability and availability	Perform under stated conditions and constraints	Reduction in complexity	Consistency and Traceability	Scalability
Delivery	Fitness for use	Ability to survive, sustain and handle failures	Utilization of available resources	Baselines and Standardization	Value for Money
Servicing Environment	Deliver Results	Supports Variability	Sophisticated and Flexible	Operability and Recoverability	Delight, beauty and simplicity

PROS AND CONS

We feel that one limitation of adapting the SERVQUAL model is that it measures the gap between actual performance and perceived performance and the perception changes over a period of time. As a result, the gap would always be present, as the expectation with respect to perception goes up all the time. This could be a disadvantage. Going forward, we can figure out to make use of other model namely SERVPERF too. Similarly, we can further detail out using service quality determinants, which are many in number, unlike those 5 things in SERVQUAL model. For the context of this discussion we have decided not to do it for now. A big advantage that we see in this approach is that service design is only a one time exercise for a given service and it can be reused over and over again, unlike products. Also note that in order to successfully adopt this model, it is essential that the demarcation of what qualities needs to be addressed at what level needs to be thought through.

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CONCLUSION

We can see that, in essence, our value driven approach assures service quality. We can generalize the value creation process as outlined below:

- Identify value to consumers and corresponding value drivers.
- Segregate value drivers based on levels of understanding and knowledge domains involved.
- Look ahead for opportunities to exemplify value.
- Identify configuration items and adapt configuration management to ensure consistency in value creation.

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